

CLAIMS

1. A method for testing pulsatile endurance of a vascular implant, comprising providing a resilient insert, inserting the insert into the vascular implant, and repeatedly
5 expanding and contracting the insert, thereby expanding and contracting the implant.
2. A method as claimed in claim 1, wherein the insert has a cavity therein and wherein the insert is repeatedly expanded and contracted by repeatedly increasing and decreasing the pressure in the cavity.
10
3. A method as claimed in claim 1 or 2, wherein the insert is a flexible tube which is closed at one end.
4. A method as claimed in any preceding claim, wherein the walls of the insert
15 surrounding said cavity are from 0.03 to 0.2mm thick.
5. A method as claimed in any preceding claim, wherein the insert is formed from latex rubber, silicone rubber or polyurethane.
- 20 6. A method as claimed in any preceding claim, wherein the insert comprises a contraceptive condom.
7. A method as claimed in any preceding claim, wherein the frequency of expansion and contraction of the insert is from 50 to 100Hz.
25
8. A method as claimed in any preceding claim, wherein the pressure in the cavity is increased by supplying the cavity with a fluid under pressure.
9. A method as claimed in claim 8 wherein said fluid is air or saline solution.
30
10. A method as claimed in any preceding claim, wherein the implant is at least partially immersed in saline solution.

11. A method as claimed in any preceding claim, wherein the implant is a bifurcated graft and wherein at least two inserts are employed, one for each branch of the bifurcation.

5 12. A method as claimed in any preceding claim, wherein the implant is a vascular graft with an internal diameter from 2 to 50mm.

13. A method as claimed in any preceding claim, wherein the testing is carried out continuously over a period of about 7 weeks.

10

14. A method as claimed in any preceding claim, wherein the contraction of the implant is due only to its inherent resilience.

15 15. A method as claimed in any of claims 1 to 13, wherein a resilient outer sheath is provided, the implant being at least partially located in the sheath, so that during expansion of the implant it presses against the sheath, the resilience of the sheath providing compressive force to the implant in addition to that provided by the inherent resilience of the implant.

20 16. A method as claimed in claim 15, wherein the sheath is formed of the same material as the insert.

25 17. Apparatus for testing pulsatile endurance of a vascular implant, comprising a resilient insert having a cavity therein and means for repeatedly increasing and decreasing the pressure in the cavity in order repeatedly to expand and contract the insert, thereby repeatedly expanding and contracting the implant into which, in use, the insert is inserted.

18. Apparatus as claimed in claim 17, wherein the insert is flexible tube which is closed at one end.

30

19. Apparatus as claimed in claim 17 or 18, wherein the means for repeatedly increasing and decreasing the pressure in the cavity can provide a frequency of expansion and contraction of the insert of from 50 to 100Hz.

5 20. Apparatus as claimed in any of claims 17 to 19, wherein the means for repeatedly increasing and decreasing the pressure in the cavity is a source of compressed air.

21. Apparatus as claimed in any of claims 17 to 20, additionally comprising a resilient outer sheath in which the implant can be at least partially located, the sheath providing a
10 compressive force when the implant expands against the sheath.